

IN THE DRAWINGS

The attached sheet of drawings includes changes to Fig. 3. This sheet, which includes Fig. 3, replaces the original sheet including Fig. 3.

Attachment: Replacement Sheet

REMARKS/ARGUMENTS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 1-19 are currently pending in the present application and Claims 1, 3-8, 10-14, and 16-19 are amended. Support for the amendments is found at least in the originally filed Specification at page 5, lines 7-10 and Figures 1-6. Thus, no new matter is added.

In the outstanding Office Action, the drawings were objected to for illegible text; Claims 4, 11, and 17 were rejected under 35 U.S.C. § 112, second paragraph; Claims 1, 3-8, 10-14, and 16-19 were rejected under 35 U.S.C. § 102(b) as anticipated by White et al. (U.S. Patent No. 5,696,937, hereafter “White”); Claims 2, 9, and 15 were rejected under 35 U.S.C. § 103(a) as unpatentable over White as applied to Claims 1, 8, and 14, respectively.

In response to the objection to the drawings, Figure 3 has been amended. Support for these amendments is found at least in the originally filed specification at page 2, lines 20-21 and Figure 1. Thus, no new matter is added. Accordingly, the objection is believed to have been overcome. Therefore, it is respectfully requested that the objection to the drawings be withdrawn.

In response to the rejection of Claims 4, 11, and 17 under 35 U.S.C. § 112, second paragraph, Claims 4, 11, and 17 have been amended to recite “for each way” instead of previously recited “is a unit of one way.” Accordingly, the rejection is believed to have been overcome. Therefore, it is respectfully requested that the rejection of Claims 4, 11, and 17 under 35 U.S.C. § 112, second paragraph, be withdrawn.

In response to the rejection of Claims 1, 3-8, 10-14, and 16-19 under 35 U.S.C. § 102(b) as anticipated by White, Applicant respectfully traverses this rejection for the following reasons. Conventional cache memory cannot be used independently of data in the main memory. Data stored in the cache memory is data which has been already stored in the

main memory or data which will be stored in the main memory in the near future. This type of data is referred to in the specification and claims as data which requires consistency of data with main memory.

Cache memory is used rather than main memory when access speed is required to be faster. In a non-limiting example of the present invention, processing speed is improved by using a portion of the data storage in the cache memory as the ordinary memory, instead of being used as the cache memory.¹ A non-limiting benefit of the claimed invention is that it makes it unnecessary to write back data stored in the region used as the ordinary random access memory. Therefore, the data does not require consistency of data with the main memory.² In a non-limiting example of the claimed subject matter the region used as the ordinary random access memory in the cache memory is provided separately from address space of the main memory.³ Therefore, it is possible to access cache memory independently of the main memory as described in amended Claim 1 which recites a cache memory comprising a data storage configured to store data which requires consistency of data with a main memory; and a storage controller which controls storing data which does not require consistency of data with said main memory, in an arbitrary data region in said data storage, the arbitrary data region having an address space different from that of said main memory.

On the other hand, White discloses the cache random access memory having a plurality of bank areas.⁴ White describes in column 1, lines 40-43 that “if a write operation is made to either the main memory or the cache memory, this can result in a non-coherent situation between the two stored items of information which ideally should always be duplicates of each other.” This description means that if writing operation is performed only to either the main memory or the cache memory, a non-coherent situation may occur. White

¹ Specification, page 6, line 30 to page 7, line 7.

² Specification, page 7, lines 8-14.

³ Specification, Figure 1.

⁴ White, Figure 1, Figure 2E, and col. 5, line 40 to col. 6, line 57.

does not describe a cache memory comprising comprising a data storage configured to store data which requires consistency of data with a main memory; and a storage controller which controls storing data which does not require consistency of data with said main memory, in an arbitrary data region in said data storage, the arbitrary data region having an address space different from that of said main memory, as recited in Claim 1. Independent Claims 8 and 14 describe similar features. Therefore, arguments made on behalf of Claim 1 also apply to Claims 8 and 14 and all respective dependent claims. Accordingly, Applicant respectfully submits that independent Claims 1, 8, 14, and their respective dependent claims are allowable. Therefore, it is respectfully requested that the rejection of Claims 1, 3-8, 10-14, and 16-19 under 35 U.S.C. § 102(b) as anticipated by White be withdrawn.

In response to the rejection of Claims 2, 9, and 15 under 35 U.S.C. § 103(a) as unpatentable over White as applied to Claims 1, 8, and 14, respectively, Applicant respectfully traverses this rejection. As discussed above, amended Claim 1 and similarly amended independent Claims 8 and 14 are believed to be allowable. Further, it is respectfully submitted that the features of Claims 1, 8, and 14 are not obvious to one of ordinary skill in the art.

It is therefore respectfully requested that the rejection of Claims 2, 9, and 15 under 35 U.S.C. § 103(a) over White as applied to Claims 1, 8, and 14 be withdrawn.

Consequently, in view of the foregoing discussion and present amendment, it is respectfully submitted that this application is in condition for allowance. An early and favorable action is therefore respectfully requested.

Respectfully submitted,

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